3. (Amended) The method of claim 1, wherein each of said one or more antisense oligomers has a length of about 12 to 25 bases.

4. (Amended) The method of claim 1, wherein each of said one or more antisense oligomers is characterized by

(a) a backbone which is substantially uncharged;

(b) the ability to hybridize with the complementary sequence of a target RNA with high affinity at a Tm greater than 50°C;

(c) nuclease resistance; and

(d) the capability for active or facilitated transport into cells.

5. (Amended) The method of claim 1, wherein said antisense morpholino oligomer comprises phosphorodiamidate intersubunit linkages, joining a morpholino nitrogen of one morpholino subunit to a 5'-exocyclic carbon of an adjacent morpholino subunit.

6. (Amended) The method according to claim 2, wherein each of said one or more antisense oligomers has a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:10, SEQ ID NO:11 and SEQ ID NO:12.

7. (Amended) The method according to claim 6, wherein each of said one or more antisense oligomers has the sequence presented as SEQ ID NO:1.

8. (Twice Amended) The method according to any one of claims 1 to 7, wherein said one or more antisense oligomers are provided to a subject in an amount sufficient to result in a peak blood concentration of at least 200-400 nM.

10. (Twice Amended) A method of modulating hematopoietic stem cell differentiation, comprising:

(a) obtaining a stem cell-containing cell population from a subject;

(b) treating the cell population in manner effective to enrich the cell population for stem cells; and

(c) exposing the enriched stem cell population *ex vivo* to one or more antisense morpholino oligomers, having a substantially uncharged backbone and a base sequence directed to a target sequence spanning the translational start codon or an intron or exon junction site of an mRNA preferentially expressed in stem cells,

under conditions effective to (i) to increase the population of lineage committed progenitor cells and their progeny in the peripheral circulation of the subject, and/or (ii) effect a slowing or diminution of the growth of cells exhibiting a loss of growth control, or a reduction in the total number of such cells; and

(d) infusing the antisense oligomer-treated cell population into said subject.

12. (Amended) The method according to claim 10, wherein each of said one or more antisense oligomers have a length of about 12 to 25 bases.

13. (Amended) The method according to claim 10, wherein each of said one or more antisense oligomers is characterized by

(a) a backbone which is substantially uncharged;

(b) the ability to hybridize with the complementary sequence of a target RNA with high affinity at a Tm greater than 50°C;

(c) nuclease resistance; and

(d) the capability for active or facilitated transport into cells.

14. (Amended) The method according to claim 10, wherein said antisense morpholino oligomer comprises phosphorodiamidate intersubunit linkages, joining a morpholino nitrogen of one morpholino subunit to a 5'-exocyclic carbon of an adjacent morpholino subunit.

15. (Amended) The method according to claim 11, wherein each of said one or more antisense oligomers has a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:10, SEQ ID

NO:11 and SEQ ID NO:12.

16. (Amended) The method according to claim 15, wherein each of said one or more antisense oligomers has the sequence presented as SEQ ID NO:1.

17. (Twice Amended) A composition comprising an antisense morpholino oligomer characterized by a backbone which is substantially uncharged, where said oligomer is directed to a sequence spanning the mRNA translational start codon of a gene preferentially expressed in stem cells.

18. (Twice Amended) The composition according to claim 17, wherein said antisense oligomer has a base sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:10, SEQ ID NO:11 and SEQ ID NO:12.

19. (Amended) A composition comprising an antisense oligomer having a substantially uncharged backbone, wherein said antisense oligomer is characterized by

(a) the ability to hybridize with the complementary sequence of a target RNA with high affinity at a Tm greater than 50°C,

(b) nuclease resistance, and

(c) the capability for active or facilitated transport into cells;

and has the sequence presented as SEQ ID NO:1.

20. (Amended) The composition of claim 19, further comprising a pharmaceutical carrier.